

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
22 December 2005 (22.12.2005)

PCT

(10) International Publication Number
WO 2005/120704 A1

(51) International Patent Classification⁷: **B01J 27/14**

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(21) International Application Number:
PCT/KR2004/001647

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(22) International Filing Date: **3 July 2004 (03.07.2004)**

(25) Filing Language: **Korean**

(26) Publication Language: **English**

(30) Priority Data:
10-2004-0043335 **12 June 2004 (12.06.2004)** **KR**

(81) Designated States (*unless otherwise indicated, for every kind of national protection available*): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

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(84) Designated States (*unless otherwise indicated, for every kind of regional protection available*): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

— *with international search report*

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: **PHOSPHORUS-CONTAINING CATALYST COMPOSITION AND HYDROFORMYLATION PROCESS USING THE SAME**

(57) Abstract: Provided are a catalyst composition comprising a bidentate ligand, a monodentate ligand, and a transition metal catalyst and a process of hydroformylation of olefins, comprising reacting the olefin compound with gas mixture of hydrogen and carbon monoxide with stirring at an elevated pressure and temperature in the presence of the catalyst composition to produce aldehyde. The present catalytic compositions show high catalytic activity, high normal-to-iso aldehyde selectivity, and high stability.

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